REMARKS

I. INTRODUCTION:

In the Office Action mailed April 7, 2004, claims 1, 9, and 17-19 are rejected. The Examiner rejected claims 1 and 17-19 under 35 U.S.C. §103(a) as being unpatentable over Suzuki et al (U.S. Patent No. 4, 507,042) ("Suzuki") in view of Gerhard et al (EP 0296 422 A2) ("Gerhard"). The Examiner rejected claim 9 under 35 U.S.C. §103(a) as being unpatentable over Suzuki in view of Gerhard and further in view of Thornes et al. (U.S. Patent No. 4,755,232) ("Thornes").

In accordance with the foregoing, claims 1 and 9 are amended. Previously withdrawn claims 4, 6-8, 12, and 14-15 are also amended. Claims 3, 11, and 17-19 are cancelled without prejudice or disclaimer.

A. Rejected Claim 1

Independent claim 1 is rejected under 35 U.S.C. §103(a) as being unpatentable over Suzuki in view of Gerhard. To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. In re Royka, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). "All words in a claim must be considered in judging the patentability of that claim against the prior art." In re Wilson, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970). If an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious. In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988). The reference must be viewed without the benefit of impermissible hindsight vision afforded by the claimed invention. Hodosh v. Block Drug Co., Inc., 786 F.2d 1136, 1143 n.5, 229 USPQ 182, 187 n.5 (Fed. Cir. 1986).

Referring to the references relied upon by the Examiner, attention is drawn to Suzuki and Gerhard. Suzuki relates to a support for an operating cable of an operating arm of an industrial robot such that the cable does not obstruct or hamper a complicated movement of the operating arm. The robot arm includes a wrist arm 14 and a rotating arm 15 such that a working tool is attached to the extremity of the rotating arm, which does not rotate about the same axis as the wrist arm. Suzuki, Column 1, Lines 55-65, FIGS. 1-2. Gerhard relates to the teaching of a control movement of a robot arm using a controller. Further, Gerhard teaches using the robot arm for cutting and welding processes.

Independent claim 1 of the present application, as amended, recites: "...tool unit ...

having ... **a variable axis varying a position or a direction of said effecting end with respect to said final rotational axis of said wrist**." Thus, the tool unit has a variable axis to vary a position or a direction of the effecting end with respect to the final rotational axis of the wrist.

The combination of Suzuki and Gerhard does not teach or suggest the feature of having a variable axis to vary a position or a direction of the effecting end with respect to the final rotational axis of the wrist. Instead, as discussed above and as shown in FIGS. 2 and 3 of Suzuki, Suzuki teaches or suggests having a tool connected to a rotating arm 15 that is connected with a wrist 14 at an end of a robot arm 13. The rotating arm 15 rotates about a different axis than the rotational axis of the wrist. Therefore, the tool does not rotate about the final rotational axis of the wrist, as is disclosed by claim 1 of the present application. Further, Gerhard simply teaches or suggests the teaching of a control movement of a robot arm having a controller and does not relate to the rotational aspects of the cutting tool with respect to the final rotational axis of the wrist.

Therefore, for at least the reasons discussed above, independent claim 1 patentably distinguishes over the references relied upon.

Further, each of withdrawn claims 4, 6 and 7 has been amended to depend from independent claim 1.

B. Rejected Claim 9

Independent claim 9 is rejected under 35 U.S.C. §103(a) as being unpatentable over Suzuki in view of Gerhard and further in view of Thornes.

Thornes relates to an apparatus for controlling the cutting and/or welding process in conformity with the actual dimensions of a workpiece that is being worked on. In particular, the cutting and/or welding tool is moved by a control unit having a lever arm 20 that is rotated about a central axis 22 of the connecting member 15 via a drive motor such that the rotational axis of the tool is aligned with the central axis of the workpiece. Thornes, Column 2, Lines 45-68, FIG. 1.

Independent claim 9 of the present application, as amended, recites: "...tool unit ... having ... **a variable axis varying a position or a direction of said effecting end with respect to said final rotational axis of said wrist**." Thus, as discussed above, the tool unit has a variable axis to vary a position or a direction of the effecting end with respect to the final rotational axis of the wrist.

The combination of Suzuki, Gerhard, and Thornes does not teach or suggest the feature of having a variable axis to vary a position or a direction of the effecting end with respect to the final rotational axis of the wrist. Instead, as discussed above and as shown in FIGS. 2 and 3 of Suzuki, Suzuki teaches or suggests having a tool connected to a rotating arm 15 that is connected with a wrist 14 at an end of a robot arm 13. The rotating arm 15 rotates about a different axis than the rotational axis of the wrist. Therefore, the tool does not rotate about the final rotational axis of the wrist, as is disclosed by claim 9 of the present application. Further, Gerhard simply teaches or suggests the teaching of a control movement of a robot arm having a controller and does not relate to the rotational aspects of the cutting tool with respect to and does not relate to the rotational aspects of the cutting tool with respect to the final rotational axis of the wrist. Thornes simply teaches or suggests aligning a rotational axis of a tool with a central axis of a workpiece.

Therefore, for at least the reasons discussed above, independent claim 9 patentably distinguishes over the reference relied upon.

Further, each of withdrawn claims 12, 14 and 15 has been amended to depend from independent claim 9.

C. Amendment of Withdrawn Claims 8 and 16:

Each of withdrawn independent claims 8 and 16 has been amended to patentably distinguish over the references relied upon by the Examiner.

Independent claim 8, as amended, recites: "... tool unit ... having ... a variable axis varying a position or a direction of said cutting effecting end with respect to said final rotational axis of said wrist." As previously discussed, none of the prior art references relied upon by the Examiner teaches or suggests this feature.

Independent claim 16, as amended, recites: "... tool unit ... having ... a variable axis for varying a position or a direction of said effecting end with respect to a final rotational axis of said movable arm ..." As previously discussed, none of the prior art references relied upon by the Examiner teaches or suggests this feature.

CONCLUSION

In accordance with the foregoing, claims 1 and 9 are amended as well as withdrawn claims 4, 6-8, 12, and 14-15. Claims 3, 11, and 17-19 are cancelled without prejudice or disclaimer. Claims 1 and 9 are pending and under consideration.

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

STAAS & HALSEY LLP

Date: 8-6-04

By: _____
Derek A. Auito
Registration No. 52,576

1201 New York Avenue, NW, Suite 700
Washington, D.C. 20005
Telephone: (202) 434-1500
Facsimile: (202) 434-1501